Model Core Curriculum videoconference on the ICN
Jan. 10, 2006

The Lead Team gathered via the ICN to be briefed on initial efforts of the three Work Teams.
Members new to the lead team or participating in their first session were introduced first:

- **Professor John Dunkhase,** coordinator of the secondary science teacher education program at the University of Iowa Science Education Center. The professor also has been a director of two math and science professional development programs, including SMILE (Science, Math Inquiry Learning Enhancement) and its sequel SMARTS (Science and Mathematics Avenues to Renewed Teachers and Students).
- **John Winter, John Deere & Co.,** who contacted the Department of Education about joining the lead team. Winter has helped develop a new recruiting/training strategy for Deere workers – one with higher technology requirements. He sees the entire high school reform effort as an opportunity to raise the quality of students going into community colleges and four-year programs, and supports efforts to raise math, science and communications skills.
- **Phyllis Staplin,** director of curriculum/technology for the West Des Moines School District. Staplin visited China late last year with a Des Moines Sister Cities delegation led by Mayor Frank Cownie.

Before reports from work team leaders, Rita Martens asked Staplin to share highlights of her visit to Chinese schools. Staplin said she was impressed with both the facilities and capabilities of students, who are enrolled as young as age 3 and attend through high school. While her visit lasted only a morning, Staplin still sensed that "rigor was in the air. Very, very high expectations…There was just a buzz in the entire place." It extended beyond science and math to an outstanding music wing, gymnastics programs preparing children for the Olympics and an entire room devoted to Legos. Students learn English as pre-schoolers so by middle school and high school, translators aren't needed. She didn't see many textbooks. Teaching in the upper levels appears to be lecture-style. Later they also visited a vocational high school, where students were learning crafts such as sewing and papercutting, but the attitude was still one of pride, Staplin noted. School administrators said they don't have issues with drugs or alcohol. If students misbehave, they are asked to leave. Attending school is considered an honor.

Work team updates

Each team has co-chairs, one of whom is a Department of Education employee.

Literacy: Rita Martens (D of Ed) and Phyllis Staplin, West Des Moines Schools curriculum director).
Math: Judith Spitzli (D of Ed) and Eric Hart, professor of mathematics and math education, Maharishi International University.
Science: Tony Heiting (D of Ed) and Shannon Cde Baca (retired science teacher from Council Bluffs CSD who now is an independent consultant in science education).

Tony, Judith and Rita confer regularly to ensure consistency in format and report content.
The three looked for work team members who represented:

- Local schools and districts,
- AEA
- Higher education – two- and four year institutions
- Those with higher level content expertise – because of the short turnaround on this assignment.
- Those with a comprehensive understanding of standards-based approaches to curriculum.

Science Team:
The first session was Dec. 29 and all but one team member attended. Rita Martens gave members an overview of the project to bring them to speed. All members were given reading material in advance, including Willard Daggett's work on rigorous and relevant curriculum. Heiting said the team also was briefed on other published standards:

- Standards and benchmarks developed by the Iowa Test of Basic Skills

- The 1988 curriculum guide developed in science by the Department of Education. This included expectations for teachers and districts.
- The National Science Education Standards, what Heiting called the "bible in science education." Unveiled in 1996, these standards have been adopted in one form or another almost every state. The NSE standards were reviewed closely by the committee, and consensus was reached to rely on those as a starting point.

The six members were divided up into three subgroups – physical, life science and earth and space science – to review corresponding parts of the NSE Standards. Topics such as science as inquiry, science and technology, science in personal and social perspectives, and the history and nature of science will be woven into the other science subjects.

The science team has representation from the elementary and middle school level, so the group is also examining transition issues from elementary, middle and high school. A second meeting was set for Jan. 20. Members were communicating online between sessions.

Math Team

At its first meeting Jan. 5, the Math Work Team also briefed members on the history and mission of this project. Co-chairs stressed the goal of improving the teaching and learning of all high school math students. Reaction among the team: intense, exciting, pleased to participate in something so important.

All agreed that the recommendations need to be consistent with the Every Student Counts math initiative and the content skills of the National Council of Teachers of Mathematics.

Reading material was sent ahead of time, along with the Chris Dede video, with instructions to look for any information essential to consider for the Iowa core curriculum. They also agreed to refresh themselves on the NCTM process standards: representation, connections, communication, reasoning and proof, and problem solving. For each standard, the group was asked: What does that mean for curriculum, instruction and assessment in the classroom?

Team members also participated as students would in solving a problem-based task and then discussed the characteristics of a problem-based instructional task.

Assignments were handed out to identify the essentials of a world class core curriculum. Those essentials were broken down into characteristics, skills and content. Within content, the work will be broken into algebra and functions, geometry and trigonometry, statistics and probability.

The group also will seek common threads in these existing efforts:

- Two programs from the NCTM, including a new program that is only for K through 8. "So we'll be doing the high school part of that," said Hart, noting there is a draft of focal points available from NCTM, and the group has a copy.
- The NAEP algebra framework and the work of ACHIEVE, a group formed at the National Governor's Conference which produced a set of high school benchmarks.
- The College Board also has a draft document with algebra standards.
- A new document from NCTM and the Association of State Supervisors evaluates the standards of the other 49 states.
- The team also plans to talk to the National Science Foundation Center for the Study of Math, based at the University of Missouri.

Work will begin with algebra and geometry. Based on feedback from the Lead Team in February, members will move on to other specialties.

Literacy Team

This team met Jan. 16., after the videoconference. Co-chair Rita Martens emailed minutes to Lead Team members. This is a summary.

The literacy team reviewed standards from the International Reading Association and the National Council of Teachers of English, which have jointly created a document, and comparing that to those of the National Center for Education and the Economy. Team members will lean heavily on the NCEE because that seemed to represent the highest levels of rigor and relevance. But the group is also collecting standards from local Iowa districts, where some strong work has already been done.

As with the other teams, the meeting began with an overview of the mission and the issues involved. The group arrived at some of the same conclusions shared by the Lead Team:

- High expectations are critical. We need to hold students, at all levels, accountable for their learning. Rigor needs to be infused into all coursework.
- The importance of collaboration and interdisciplinary curriculum. Instead of focusing on content, it's more important to developing thinking skills and problem solving.
- The most important skill students need is a love of learning. Students may be asked to adapt their skills repeatedly through their lives. Teach them to be adaptable.
- How do we create a "yeasty" learning environment here like the one Staplin witnessed in the Chinese fine arts academy? The curriculum we identify must be engaging to support students in developing strong work ethics.
- Accept the reality that we will always "speak with an accent" because we aren't digital natives. Several members said they have shared or plan to share this article on this subject with fellow educators because it's important that teachers recognize the change in how students learn.
- Resist the temptation to create a curriculum that is a mile wide and an inch deep. Remember Dede's contention that simple skills can be taught in the context of developing complex skills.

The team reviewed data available on statewide assessments of reading - 8th grade ITBS and 11th grade ITED scores – and saw room for improvement. The members also examined 8th grade National Assessment of Education Progress (NAEP) scores, and the '05 NAEP reading assessment and how that compares to the newly designed '09 NAEP reading assessment. The members also discussed how Iowa' current reading curriculum may not match the NAEP assessment and how their work might address that.

Questions/Comments from Lead Team members

- **John Winter**: What steps will we take to integrate the three areas – literacy, math, science – and other curriculum to add relevance to programs? He was talking especially about career and technical education.
  Work team leaders said they intended to explore the need for skills, including technical skills, as they fleshed out the curriculum concepts.
- **Kristin Steingreaber:** She stressed the need to focus on how curriculum is taught and to keep in mind the words "engagement" and "technology" and how to weave those into classrooms. She recommended a new book, "New Visions in Math and Literature".
- **Phyllis Staplin:** She reminded that the need to set high expectations and challenge students is also true for special ed and ESL students.
- **Susie Olesen:** She mentioned the controversy in the math and science fields, particularly those who think we should teach calculation exclusively. Do we have a strategy for bringing them into the conversation?
  Hart said his group would emphasize the need to be research-based. "The research is just overwhelmingly strong in the research approach we're looking at….Our charge is to present a vision of what the wisdom of the research in the field says, so we want to hold true to that even as we acknowledge some other things and bring them into the fold."
- **Hope Bossard:** She's interested in hearing more about the rollout plans. She also suggested a name from the field of drama and speech (The Literacy team hopes to include a representative from those fields.) She also asked for a compilation of the key materials being used by each work group and bibliography of major references.

- **Vicki Goldsmith**: She called for a "loud collective educator voice". One of the reasons for the high rate of new teachers quitting the profession has in part to do with feeling as if they have no voice on matters of curriculum.
- There were multiple calls for **getting students more involved** in the process.
- **Steve Goodall**: Good work already has been done at the local level on standards. Teams should be careful not to "walk over all the work" people have done.
- **Bill Callahan**: What plans are being made to evaluate and validate after the model curriculum is rolled out? How will we find out if anything really changes? Does this really impact student achievement out in the state? The evaluation step too often gets short-changed. Martens said she would bring it up with Pam Pfitzenmaier and Jim Reese. Later, she also collected the names of several lead team members to help develop this piece.
- **Dale Gruis**: He envisions posting all of the findings on the web, to let teachers, business, industry and students offer input. That idea was applauded by Phyllis Staplin and John Winter.

The Department has created a web site where all the work to-date is posted, including readings and minutes of past meetings.
http://www.state.ia.us/educate/ecese/hsmcc/index.html

Looking ahead, Martens announced these key dates:

Feb. 27: Current plan calls for several ICN sessions with work teams, various diversity groups, and community college students – particularly those in remedial courses. These are feedback gathering sessions.
Based on comments during this session, Martens said she also heard support for getting feedback from business and industry. She'll contact John Winter and others to see what can be arranged.

Feb. 28: A Lead Team meeting at Botanical Center to listen to and give feedback to work teams. Work team draft documents will be shipped to lead team members on Feb. 20.